

Amendment
Serial No. 10/755,448
Attorney Docket No. 020296A

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 5.

REMARKS

Claims 5 and 8-17 are pending. Independent claims 5 and 8 are amended.

A Replacement Sheet depicted sheet 5 is submitted herewith. Fig. 5 has been amended to correct the spelling of "Chamber."

Claims 5 and 8-10 were rejected under 35 USC §102(e) as being anticipated by Edwards, Jr. et al. This rejection is respectfully traversed.

Edwards discloses removal of oxygen from a native oxide film SiO_x formed on a Si substrate by depositing an oxide of alkali earth metal element such as SrO or BaO by an MBE process and causing the SiO or BaO thus deposited to react with the native oxide SiO_x on the Si substrate.

Thus, when SrO is used, there is formed an oxide of Sr, Si and O represented generally as $\text{Sr}_x\text{Si}_y\text{O}_z$ on the Si substrate in the structure of Edwards as a result of the oxygen removal reaction of SrO with the native oxide film SiO_x . Such a compound may be formed of Sr_2SiO_4 , SrSiO_3 ..., or mixture thereof, wherein it should be noted that the number of cations and the number of anions are not equal with these compounds. Thus, the film 26 of Edwards cannot have a rock salt or sodium chloride structure but has a much more complicated crystal structure. Associated with this, the film 26 of Edwards cannot take an epitaxial relationship with regard to the Si substrate.

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In the present invention, it should be noted that the Si substrate used for the epitaxial deposition is already removed with the native oxide film by HF processing. Reference should be made to page 24, line 24 of the original disclosure.

Further, the same argument applies to claim 8. Thus, Edwards is entirely silent about the feature of the structure in which a rock salt structure layer is formed epitaxially on a Si substrate with an intervening amorphous film.

Claims 1 and 8 have been amended such that the first and second single-crystal oxide thin films are “in epitaxial relationship” with the underlying Si substrate or layer rather than using the process limitation of “formed through epitaxial growth”. This representation is not a process limitation and also clarifies the feature of the present invention over Edwards.

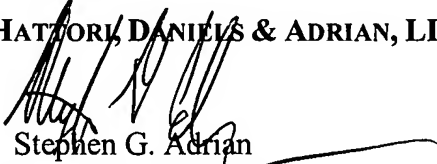
For at least the foregoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited.

Should the Examiner deem that any further action by applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone applicants’ undersigned attorney.

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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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Attachment: Replacement Sheet